

User Guide

Sterivex™-HV Sterile Vented Filter Unit, 0.45 µm

For Laboratory Use Only

Single Use Only



Single Use Only

Introduction

SVHV01015 - Sterivex™-HV filter unit without filling bell (15/pk)

SVHV010RS - Sterivex™-HV filter unit without filling bell (50/pk)

SVHVB1010 - Sterivex™-HV filter unit with filling bell (10/pk)

SVHVL10RC - Sterivex™-HV filter unit with Luer-Lok™ outlet (15/pk)

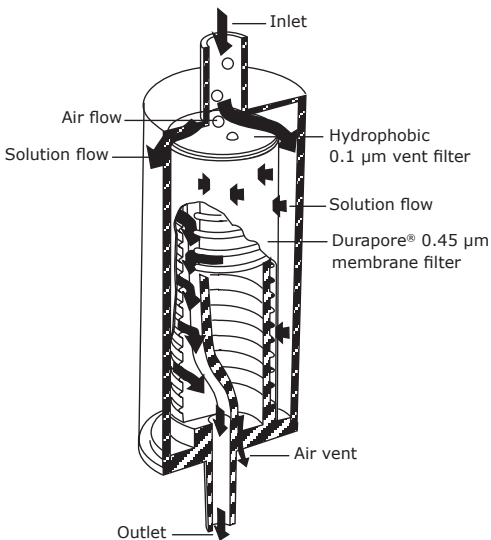
Sterivex™-HV filter units are sterile devices for use in the clarification of aqueous solutions. They remove microorganisms, particles, precipitates and undissolved powders larger than 0.45 µm. These single-use filter units consist of a Durapore® polyvinylidene fluoride (PVDF) membrane sealed around a reinforced plastic core (see diagram in next panel for details).

Solutions containing serum or high levels of ultrafine particles may hinder filtration through the smaller pore size 0.22 µm Sterivex™-GV filter units. However, prefiltering such solutions with the 0.45 µm Sterivex™-HV filter unit prior to filtration through the 0.22 µm filter unit eliminates this problem.

Sterivex™ filter units can be connected to a syringe, repeating syringe, peristaltic pump, or pressure vessel. The Sterivex™-HV filter unit is a non-toxic, self-venting device capable of withstanding pressures up to 3.1 bar (45 psi).

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.

Diagram of Sterivex™-HV Filter Unit



Precautions

- Do not use this product for direct patient care applications; it was designed for laboratory use only.
- Do not use the Sterivex™-HV filter unit at temperatures above 45 °C (113 °F).
- Do not use with syringes smaller than 10 mL because pressures in excess of the maximum pressure rating may be reached, potentially causing damage to the filter unit and/or personal injury.
- Do not exceed pressures of 3.1 bar (45 psi).
- When connecting the Sterivex™ filter unit inlet to tubing from a peristaltic pump or pressure vessel, use a 6.4 mm (1/4 in.) hose barb to Luer-Lok™ adapter (cat. no. XX3002564).
- Do not resterilize or reuse the Sterivex™-HV filter unit. It is designed for single use only.

Directions for Use with Syringe or Repeating Syringe

1. Fill the syringe or place the tubing from the repeating syringe into the flask of solution to be sterilized.
2. Peel open the pouch containing the Sterivex™-HV filter unit using aseptic technique.
3. Attach the syringe to the filter unit and withdraw it from the pouch.

4. Push syringe plunger and deliver filtered solution into an application-appropriate container.
5. Repeat step 4 as required, then discard the Sterivex™-HV filter unit appropriately.

Directions for Use with a Peristaltic Pump

1. Fill a flask with the solution to be sterilized.
2. Prepare a peristaltic pump. For best results, use a pump drive and pump head that can deliver a flow rate of approximately 100 mL/min at a speed of 60 rpm. Load the peristaltic pump head with 4.8 mm (3/16 in.) silicone tubing and attach a 6.4 mm (1/4 in.) hose barb/Luer-Lok™ adapter to the outlet side of the tubing.

CAUTION: Do not exceed pressures of 3.1 bar (45 psi).

3. Peel open the pouch containing the Sterivex™-HV filter unit using aseptic technique.
4. Attach the Luer-Lok™ end of the hose barb/Luer-Lok™ adapter to the inlet of the filter unit and withdraw it from the pouch.
5. Connect the unit to a ring stand and place a sterile collection flask under it.
6. Turn on the pump. When filtration is complete, discard the Sterivex™-HV filter unit appropriately.

Directions for Use with a Pressure Vessel

1. Fill a 5-liter pressure vessel with the solution to be sterilized.
2. Prepare the pressure vessel. For best results, pressurize the vessel at 1.0 to 1.4 bar (15 to 20 psi). This generates an average flow rate of approximately 170 mL/min. Attach 4.8 mm (3/16 in.) ID silicone tubing to the outlet of the pressure vessel and attach a 6.4 mm (1/4 in.) hose barb/Luer-Lok™ adapter to the outlet of the tubing.
3. Peel open the pouch containing the Sterivex™-HV filter unit using aseptic technique.
4. Attach the Luer-Lok™ end of the hose barb/Luer-Lok™ adapter to the inlet of the filter unit and withdraw it from the pouch.
5. Connect the unit to a ring stand and place a sterile collection flask under it.
6. Turn on the pressure vessel. When filtration is complete, discard the Sterivex™-HV filter unit appropriately.

Specifications

Materials	Durapore® hydrophilic PVDF membrane Durapel™ hydrophobic PVDF vent filter Copolyester housing and core Copolyester filling bell with polyethylene cap
Pressure limit at 25 °C	3.1 bar (45 psi)
Average water flow rate	170 mL/min at 1.4 bar (20 psi)
Filter pore size	Durapore® HV membrane: 0.45 µm Durapel™ vent filter: 0.1 µm
Filtration area	10 cm ² (1.55 in ²)
Temperature limit	45 °C (113 °F)
Sterility	Gamma irradiated; meets current United States Pharmacopeia (USP) criteria for sterile products
Toxicity	Non-toxic (meets USP criteria)
Connections	Inlet: female Luer-Lok™ fitting Outlet: male tubing adapter, 3.3 mm (0.13 in.) OD or male Luer-Lok™ fitting
Dimensions Diameter Length	Filter without filling bell: 1.7 cm (0.67 in.) Filter with filling bell: 5.5 cm (2.2 in.) Filter without filling bell: 6.9 cm (2.7 in.) Filter with filling bell: 8.7 cm (3.4 in.) Filter with Luer-Lok™ outlet: 8.0 cm (3.1 in.)

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